

A NEW GENUS EUPATORIADELPHUS

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Four species of verticillate leaved Eupatorieae in the eastern United States form a natural and distinctive group which many people mistakenly consider typical of the genus Eupatorium. The four species were the only representatives of Eupatorium in America according to E.L.Greene (1903). Actually, the type species of Eupatorium is the European E. cannabinum Linnaeus which does not have verticillate leaves, and which agrees very well generically with such American species as E. capillifolium (Lam.) Small, E. perfoliatum Linnaeus, E. rotundifolium Linnaeus and E. serotinum Michaux.

Eupatoriadelphus, the genus that we are establishing for these four species, is most readily distinguished by the verticillate leaves, but also has stomates on the backs of the corolla lobes and tendencies for distinct carpodia, more pointed pappus setae, and occasional hairs on the tube of the corolla or setae on the achene, all characters not found in Eupatorium. This group of species has been distinguished in the past by Decandolle as section Verticillata of Eupatorium. The species have since been treated independently by Wiegand and Weatherby (1937). The cytology has been reviewed by Grant (1953).

Of the many genera that must be removed from the previous artificial concept of Eupatorium, Eupatoriadelphus is the only one that really seems at all closely related to that genus. As recognized here both Eupatorium and Eupatoriadelphus are entirely natural concepts each having specializations not found in the other.

Eupatoriadelphus R.M.King and H.Robinson, genus novum Compositarum (Eupatorieae). Plantae herbaceae pauce ramosae. Folia verticillata, petiolo brevi. Inflorescentiae corymbosae. Involucri squamae 12-22 valde inaequilongae multiseriatae imbricatae; receptacula convexa glabra. Flores 5-20 in capitulo; corolla tubulares extus superne glanduliferae inferne interdum parce setiferae, cellulis angustis parietibus sinuosis, lobis extus pauce stomatophoris; filamenta antherarum in parte superiore distincta, cellulis inornatis plerumque quadratis, cellulis exothecialibus quadratis vel breve oblongis, appendicibus antherarum longis; styli inferne nodulosi dense hirsuti, appendicibus

leviter papillatis; achaenia prismatica 5-costata glandulifera; carpodia saepe distincta, cellulis laxis subquadratis, parietibus tenuibus; pappi setiformes scabri, cellulis apicalibus acutis vel subobtusis.

Species typica: Eupatorium purpureum Linnaeus

Chromosome numbers determined as  $2n = 20,40$  (Grant, 1953).

Our studies indicate that the genus contains the following four species all from eastern North America.

Eupatoriadelphus dubius (Willd. ex Poir) R.M.King & H.Robinson, comb. nov. Eupatorium dubium Willd. ex Poir, Encyc. Suppl. 2:606. 1811.

Eupatoriadelphus fistulosus (Barratt) R.M.King & H.Robinson, comb. nov. Eupatorium fistulosum Barratt, Eup. Vert. no 1, 1841.

Eupatoriadelphus maculatus (Linnaeus) R.M.King & H.Robinson, comb. nov. Eupatorium maculatum Linnaeus, Cent. Pl. 1:27. 1755.

Eupatoriadelphus purpureus (Linnaeus) R.M.King & H.Robinson, comb. nov. Eupatorium purpureum Linnaeus, Sp. Pl. 838: 1753.

#### Literature Cited

- Grant, W.F. 1953. A Cytotaxonomic Study in the Genus Eupatorium. Amer. Jour. Bot. 40(9):729-742.
- Greene, E.L. 1903. Neglected Eupatoriaceous genera. Leaflet. Bot. Obs Crit. 1: 7-13.
- Wiegand, K.M. and C.A. Weatherby 1937. II. The Nomenclature of the Verticillate Eupatoria. Rhodora 39:297-306. pl. 466-468.